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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/905,716

05/09/2001

Fredric Joel Harris

HA-0108

4462

7590

11/17/2004

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EXAMINER

WILLIAMS, LAWRENCE B

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



## Office Action Summary

**Application No.**

09/905,716

**Applicant(s)**

HARRIS, FREDRIC JOEL

**Examiner**

Lawrence B Williams

**Art Unit**

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 6-8 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 and 5 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☒ Claim(s) 6-8 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)          |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. <u>1</u>   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |



## **DETAILED ACTION**

### ***Election/Restrictions***

1. During a telephone conversation with Robert A. Brown on 03 November 2004 a provisional election was made without traverse to prosecute the invention of “a receiver for receiving and efficiently separating a composite 3-G wireless communication signal”, claims 1-5. Affirmation of this election must be made by applicant in replying to this Office action. Claims 6-8 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Specification***

2. The disclosure is objected to because of the following informalities:
  - a.) Examiner suggests applicant define acronyms (UMTS and UTRA) in line 6 of page 1.
  - b.) Examiner suggests applicant correct formulas relating to rotation rate in lines 912 of page 6.
  - c.) Examiner suggests applicant insert the heading “Summary of the Invention” after line 5 of page 19.

Appropriate correction is required.

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***



4. Claims 2-4 are objected to because of the following informalities: The claims are narrative in form. Examiner suggests applicant rewrite the claims in such a manner as to present a complete operative device. Note the format of the claims in the patent(s) cited.

5. Claim 2 is objected to because of the following informalities:

a.) Examiner suggests applicant delete "the " after wherein, since this is the first definitive introduction of the claimed tasks.

a.) Claim 2 recites the limitation "the single polyphase filter" in line 3. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 4 is objected to because of the following informalities:

a.) Examiner suggests applicant replace "the" with an "a" since this is the first introduction of the polyphase filter.

b.) Examiner suggests applicant delete the "- " before elected in line 3.

c.) Claim 4 recites the limitation "the polyphase partitioned filter" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

### ***Double Patenting***

7. Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 09/905,717. Although the conflicting claims are not identical, they are not patentably distinct



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from each other because claim 1 of the instant application is a broad version of copending Application No. 09/905,717. The limitation of the instant application; “combining **multiple processing tasks** of a conventional receiver into a single entity, **wherein the entity performs the processing required for multiple channels in a single device**” teaches the limitation “wherein said receiver combines **multiple processing tasks** of a conventional receiver in two entities comprising; an equal-ripple linear phase recursive filter channelizer and an equal-ripple linear recursive interpolator, and **the channelizer entity performs the processing required for multiple channels in a single device**” as disclosed in co-pending Application No. 09/905, 717.

8. Claim 2 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of copending Application No. 09/905,717. Although the conflicting claims are not identical, they are not patentably distinct from each other because all limitations of claim 2 of the instant application are taught in claim 2 of co-pending Application No. 09/905,716.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.



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10. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Steinbrechner (US Patent 5,566,173).

Steinbrechner discloses in Fig. 2, a receiver for receiving and efficiently separating a composite 3-G wireless communications signal into its constituent base-band components, comprising; combining multiple processing tasks of a conventional receiver into a single entity, wherein the entity performs the processing required for multiple channels in a single device (36; col. 3, line 52-col. 4, line 10).

***Allowable Subject Matter***

11. Claims 4-5 are allowed.

12. Claims 2-3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: The instant application discloses a filter and processing for demodulating a composite 3G (third generation) wireless signal. Prior art does not teach a filter or process comprising; “ an equal-ripple linear phase recursive filter channelizer and an equal-ripple linear recursive interpolator, and the channelizer entity performs the processing required for multiple channels in a single device” as disclosed in claim 1. The prior art also fails to teach a receiver structure “wherein interaction of the two sample rate changes is absorbed in the polyphase filter as a scheduling of



the input data samples being delivered to elected filter registers for computation of register outputs, and selected registers may not receive input samples when directed to deliver output samples” as taught in claim 4.

### *Conclusion*

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a.) Allpress discloses in US Patent 5,926,455 Recursive Filters For Polyphase Structures.

c.) Kumar et al. discloses in US Patent 2003/0076899 A1 a PolyPhase Channelization System.

c.) Wilson et al. discloses in US Patent 5,657,261 Interpolation of Digital Signals Using Signal Sample Replication.

d.) Cho discloses in US 2004/0162023 A1 Reconfigurable Analog Baseband For A Single-Chip Dual-Mode Transceiver.

e.) Park discloses in US 2004/0095951 A1 a Digital Filter of a Mobile Communication System and Operating Method Thereof.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 571-272-3037. The examiner can normally be reached on Monday-Friday (8:00-5:00).



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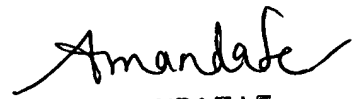
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence B. Williams

lbw

November 5, 2004

  
AMANDA T. LE  
PRIMARY EXAMINER